

Date: Tue, 12 Jul 94 04:30:30 PDT  
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>  
Errors-To: Ham-Homebrew-Errors@UCSD.Edu  
Reply-To: Ham-Homebrew@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Homebrew Digest V94 #191  
To: Ham-Homebrew

Ham-Homebrew Digest                      Tue, 12 Jul 94                      Volume 94 : Issue    191

Today's Topics:

                    Air system sockets better?  
                            CW Timings  
                            FSK VCXO Circuits  
                    International Instruments/Sigma instruments  
                            Old Parts  
                            PMP  
                            Poor Man's Packet?  
                            QST DDS article  
                            RDF kit order lost  
                    RF & IF tank alignment hints  
                            RSGB BOOK (2 msgs)  
                            Single 813 amp?  
                            SUMMARY DSP algorithms  
            Wanted: Popular Electronics article from May 94 issue

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>  
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

-----

Date: 11 Jul 94 18:57:07 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: Air system sockets better?  
To: ham-homebrew@ucsd.edu

Anyone out there have any experience with air system sockets for the  
3-500 or 4-400 line of tubes?

I am considering replacing the ceramic sockets in my homebrew amp,

with air system type sockets. The reason being that I find the noise generated by the air passing thru the pressurized chassis, thru those tiny holes in the ceramic sockets, and out thru the tube base to be too loud. I've mounted a squirrel cage blower in the adjoining room and pipe the air in via large 4" hose. The blower is rated at 95 cfm @ 0" / 70 cfm @ 2" H2O. I have a variac on the blower and have two settings, one for casual use and another for full-tilt contesting. But, even at the lower voltage setting I find the noise objectionable. I think the air system type of socket would present less resistance to the air yielding lower back pressure. Hence, I could move more air with less pressure. BUT, I don't know this for certain, and was hoping someone reading this forum could give me another opinion before I perform surgery on the amp.

Thanx & 73 de Walt - K2WK    waltk@pica.army.mil

-----  
Date: 11 Jul 94 13:42:22 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: CW Timings  
To: ham-homebrew@ucsd.edu

Thanks to all who responded to my posting...

73, Marco

--  
Marco Fassiotto, 1111y/aa1iu  
Internet : fax@sparc4.ico.olivetti.com  
AX25 : aa1iu@n0ary.#nocal.ca.usa.na

-----  
Date: Mon, 11 Jul 1994 17:13:03 GMT  
From: psinntp!cooper!mark@uunet.uu.net  
Subject: FSK VCXO Circuits  
To: ham-homebrew@ucsd.edu

Hello all,

Could someone steer me in the direction of where I can find a voltage controlled oscillator circuit that would be suitable for, say, a 16 step FSK input? My desire is to transmit 4 bit bauds via FSK, hopefully over only 1-2KHz bandwidth in the 27MHz region. Thanks!

BTW, does the ARRL have a WWW server?

```
; Mark Balch           The Future is MPP!
; The Cooper Union    mark@alf.cooper.edu    [slow but reliable]
; (212) 353-4350      mark@magnum.cooper.edu [fast but chancy]
```

Let me see if I can explain this:  
I am looking for a triple purpose panel meter made by International instruments a division of sigma instruments inc. The meter shows tuning on the left side battery strength in the middle and output on the right. It is about 3 1/2" X 2 1/2". The box says Range 001 MA Model 1122HL. The company used to be at 88 Marsh Hill Road, Orange, Conn.  
Thanks for any info.

```
*****
* The opinions expressed are mine and do not reflect the views of*
* Twinix Systems Inc. or 3M.                                     *
*****
```

Newark Electronics SF and other cities  
Arlington RElectronic Wholesaler Arlington VA  
Probably radio shack

```
In article <2vha47$cf5@dawn.mmm.com>,  
Tahir Kayani <tahir@tcdsp1.mmm.com> wrote:  
>I am looking for the following parts:  
>  
>Lamp GE1819  
>transistor 2N5490  
>Voltage Regulator (12v) 7812 (NC7812C or NC7812K)  
>
```

>Please email directly. Thanks for any help.

>--

>\*\*\*\*\*  
>\* The opinions expressed are mine and do not reflect the views of\*  
>\* Twinix Systems Inc. or 3M. \*  
>\*\*\*\*\*

--

I think I've got the hang of it now .... :w :q :wq :wq! ^d X exit ^X^C ~.  
^[x X Q :quitbye CtrlAltDel ~~q :~q logout save/quit :!QUIT ^[zz ^[ZZ  
ZZZZ ^H ^@ ^L ^[c \$q ^# ^E ^X ^I ^T ? help helpquit ^D ^d ^C ^c help  
^]q exit ?Quit ?q \qy \xyy F.M.H.! YMHAOS edw@sequent.COM KA9AHQ 28.340

-----  
Date: Mon, 11 Jul 1994 23:45:37 GMT  
From: ihnp4.ucsd.edu!sdd.hp.com!hp-pcd!news!steves@network.ucsd.edu  
Subject: PMP  
To: ham-homebrew@ucsd.edu

I think I still have that info somewhere. I built  
the modem/interface and it seemed to work pretty  
well -- except the Ramsey 2M I think has some problems.  
If I can find the stuff I'll copy it and send it to  
you if you'll email your address.

Steve Schoeneman  
KA7HHB

-----  
Date: Mon, 11 Jul 1994 17:41:35 GMT  
From: ihnp4.ucsd.edu!news.cerf.net!biivax.dp.beckman.com!mail.beckman.com!  
eamurashie@network.ucsd.edu  
Subject: Poor Man's Packet?  
To: ham-homebrew@ucsd.edu

I can't find any local libraries that have the back issue of  
73 Amateur Radio Magazine for Aug 1991. That issue has the  
schematic for the poor man's packet interface. Does anyone  
have a postscript file, pcx file, ascii art file of the  
schematic?

Unfortunately I read a nice posting from someone who had just  
received Dove for the first time. Unfortunate, because I spent  
all weekend tuning in listening to Dove for the first time. That  
got me hooked on learning about packet radio, which used up my



His mailing address is a PO box (same as on the order sheet)  
and he has an unlisted number.

Has any one ordered any kits from him and received them?

The only money we are out is the cost of a money order  
since the kits are to come COD, but if I knew he  
wasn't going to deliver I would do something different.

My next step is to complain to the Post office.

I am also trying to buy the PC boards and make my own  
kits for the club.

FAR Circuits sells boards and I have had good luck with them  
in the past.

Joe Wilkes

-----  
Date: Mon, 11 Jul 1994 14:27:17 GMT  
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!gatech!news-feed-1.peachnet.edu!  
news.duke.edu!godot.cc.duq.edu!nntp.club.cc.cmu.edu!cantaloupe.srv.cs.cmu.edu!  
dolphin!ed@network.ucsd.edu  
Subject: RF & IF tank alignment hints  
To: ham-homebrew@ucsd.edu

I am preparing to align an older hf rig, Tempo One,  
and wonder if there are any good tips on aligning the rx & tx circuits.

I have a pseudo RF generator, "a modified dip meter oscillator" in an old  
heathkit RF generator box. Its not accurate freq wise, I dont want to  
screw up and Peak the IF off center. I thought of just using the antenna input  
and peaking from the bottom up.

Comments?  
Tips?  
Ideas?  
Things not to do?

Ed N3SD0  
Ed@fore.com

-----  
Date: Mon, 11 Jul 1994 14:08:48 GMT  
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!darwin.sura.net!  
fconvx.ncifcrf.gov!mack@network.ucsd.edu  
Subject: RSGB BOOK  
To: ham-homebrew@ucsd.edu

In article <9407110930.aa16788@argos.ee.surrey.ac.uk> M.Willis@ee.Surrey.ac.UK  
writes:

>You want the VHF Handbook, but beware, it is going to be replaced very  
>soon with a new edition. The DX book is also very good but not for the USA  
>as we have different bands and power limits in Europe. A lot still applies  
>but a lot does not.  
>  
>73 Mike

You can't get the VHF/UHF DX book in the US at the moment. The ARRL has  
been back ordered for months and none of the other suppliers have it.  
I thought it was very good and was trying to get another copy for a friend.  
Does anyone know a source in the US for this book (or how much is  
it via the RSGB and how do I get it from the US?)

Joe Mack  
mack@ncifcrf.gov

-----  
Date: Mon, 11 Jul 1994 22:01:03 GMT  
From: netcomsv!netcom.com!netcom13!faunt@decwrl.dec.com  
Subject: RSGB BOOK  
To: ham-homebrew@ucsd.edu

I have the June RadCom in front of me, and it lists the VHF/UHF DX  
Book at \$18.00 for non-members of the RSGB. They ask for \$1.75 for  
overseas surface mail. Voice phone is 707-659015 and fax number is  
707-645105 (prefix by 011 44 from the US). The easiest way to pay is by  
Visa or Mastercard. The mailing address is RSGB Sales (CWO), Lambda  
House, Cranbourne Road, Potters Bar, Herts EN6 3JE.  
73, doug

-----  
Date: 11 Jul 1994 16:35:34 GMT  
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!spool.mu.edu!darwin.sura.net!  
news.lsu.edu!rouge.phys.lsu.edu!pulley@network.ucsd.edu  
Subject: Single 813 amp?  
To: ham-homebrew@ucsd.edu

Hello,

I recently came across a large part if not complete linear amplifier which uses one 813 tube. I was hoping someone knew of some old magazine article(maybe QST or something) which describes such a beast. I can probably figure out what is and is not missing, but I was hoping to make my life easier by looking at an at least similar circuit diagram. Any help will be appreciated.

reply to

pulley@rouge.phys.lsu.edu

or to this group.

Thanks,

-----  
Date: 11 Jul 1994 16:27:42 GMT

From: ihnp4.ucsd.edu!swrinde!howland.reston.ans.net!noc.near.net!sunfish.hi.com!brainiac.hi.com!user@network.ucsd.edu

Subject: SUMMARY DSP algorithms

To: ham-homebrew@ucsd.edu

Here's what I've heard so far regarding the denoising algorithms in the popular digital audio filters. None of this is confirmed, so take it with a grain of salt.

The Timewave unit uses the LMS/short-time correlation algorithm, but with a 16-bit converter.

The JPS NIR-10 uses an FFT/threshold/inverse-FFT algorithm, where FFT frequency bins that are below a threshold are set to zero. Some say that this produces more audible artifacts than the LMS/short-time correlation algorithm. I can't say for sure; I've only heard the NIR-10 and no others, but it seems like a reasonable claim.

The JPS units that advertise "pink noise reduction" appear to use the LMS/short-time correlation algorithm, like W9GR's.

Regards,

-Steve

Steve Byan  
Hitachi Computer Products (America), Inc.  
1601 Trapelo Road  
Waltham, MA 02154

internet: steve@hi.com

phone: (617) 890-0444

FAX: (617) 890-4998  
-----



Date: 11 Jul 1994 18:44:29 GMT  
From: ihnp4.ucsd.edu!swrinde!howland.reston.ans.net!vixen.cso.uiuc.edu!  
prairienet.org!folson@network.ucsd.edu  
Subject: Wanted: Popular Electronics article from May 94 issue  
To: ham-homebrew@ucsd.edu

I am looking for a an article in the May issue of 1994 about  
an NBS crystal radio article. If anyone could send me a copy of  
the article I'd appreciate it. I will refund your stamp!! Thanks  
Fran (WB9ULS). I am unable to get it from the local library or  
book stores.

--  
Fran Olson (WB9ULS) email:folson@prairienet.org  
P.O. Box 1122  
Champaign, IL. 61824-1122  
U.S.A.

-----  
Date: 11 Jul 1994 19:52:02 GMT  
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!howland.reston.ans.net!gatech!news-  
feed-1.peachnet.edu!paperboy.wellfleet.com!noc.near.net!sunfish.hi.com!  
brainiac.hi.com!user@network.ucsd.edu  
To: ham-homebrew@ucsd.edu

References <steve-080794120732@brainiac.hi.com>, <jdow.773702146@BIX.com>,  
<mzenierCcssFwE.J0M@netcom.com>  
Subject : Re: Frequency conversion - non-linear mode

> Dr. Ulrich Rohde has had several article in QEX on modeling receiver  
> front ends and other RF circuits.  
>  
> [...]  
>  
> It's all above me, but it looks like he can get noise figure and  
> dynamic range out of a software package called Microwave Harmonica.

I dunno about Microwave Harmonica, but it seems to me that a good part of  
Rohde's articles deal with calculating the system 3rd-order intercept given  
the 3rd-order intercept of the pieces. This is well and good, but it leaves  
me wondering how to predict the 3rd-order intercept of the pieces. I  
suppose one measures it in the lab. (Lab? What's that? :-) Since I'm  
lab-equipment-poor, I'm interested in good models that predict 3rd-order

intercept reasonably well.

Steve Byan  
Hitachi Computer Products (America), Inc.  
1601 Trapelo Road  
Waltham, MA 02154

internet: steve@hi.com  
phone: (617) 890-0444  
FAX: (617) 890-4998

-----  
Date: Mon, 11 Jul 1994 18:12:12 GMT  
From: ihnp4.ucsd.edu!usc!nic-nac.CSU.net!charnel.ecst.csuchico.edu!  
csusac.ecs.csus.edu!csus.edu!netcom.com!mzenier@network.ucsd.edu  
To: ham-homebrew@ucsd.edu

References <jdow.773628861@BIX.com>, <steve-080794120732@brainiac.hi.com>,  
<jdow.773702146@BIX.com>.com  
Subject : Re: Frequency conversion - non-linear mode

jdow on BIX (jdow@BIX.com) wrote:  
: steve@hi.com (Steve Byan) writes:  
: >Are the spice transistor models good enough to predict intermodulation  
: >distortion?

: Re spice models vis a vis IMD: I dunno - I built my own small signal circuit  
: analysis proggy long ago and did large signal analysis almost purely from  
: "first principles" and data sheets.

Dr. Ulrich Rohde has had several article in QEX on modeling receiver  
front ends and other RF circuits.

"Differences between Tube-Based and Solid State Based Receiver Systems  
and Their Evaluation Using CAD" QEX, ARRL Experimenters Exchange,  
April 1993.

This is a summary of a presentation "Overview of State of the Art of  
Modeling the Dynamic Range of VHF, Microwave and Millimeter Receiver  
Systems using Computer Aided Design" VHF Conference, Sept 19-20 1992,  
Weinheim, Germany.

It's all above me, but it looks like he can get noise figure and  
dynamic range out of a software package called Microwave Harmonica.

Mark Zenier mzenier@netcom.com mzenier@eskimo.com

-----  
End of Ham-Homebrew Digest V94 #191

\*\*\*\*\*